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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,405	09/16/2003	Kouichi Fukuda	HITA.0433	9675

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EXAMINER	
CALEY, MICHAEL H	
ART UNIT	**PAPER NUMBER**
2871	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AHC

Office Action Summary	Application No.	Applicant(s)	
	10/662,405	FUKUDA ET AL.	
	Examiner	Art Unit	
	Michael H. Caley	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima (U.S. Patent No. 6,906,767) in view of Kimura et al. (U.S. Patent No. 6,602,596 "Kimura").

Regarding claim 1, Iijima discloses a liquid crystal display device having:

a transmissive type liquid crystal display panel (Figure 6 element 20') which sandwiches a liquid crystal layer (Figure 6 element 25) between a pair of substrates (Figure 6 elements 21 and 22); and

a backlight (Figure 6 element 70) arranged at a back face of the liquid crystal display panel and having a light source (Figure 6 element 71) and a reflector (Figure 6 element 80), wherein the liquid crystal display device is capable of performing as a transmissive display which uses light from the light source and as a reflective display which uses external light incident from a front face side of the liquid crystal display panel by reflecting the external light on the reflector (Figures 2 and 3),

further comprising a polarizer (Figure 6 element 15)is arranged between the back-face-side substrate of the pair of substrates and the backlight, the polarizer being formed

to absorb polarized light having a predetermined polarization direction (Figures 2 and 3; Column 4 lines 44-48), and

a light diffusion layer (Figure 6 element 30) arranged between the back-face-side substrate out of the pair of substrates and the reflector of the backlight.

Iijima fails to disclose a second light diffusion layer arranged between the back-face-side substrate out of the pair of substrates and the reflector of the backlight, and further, is silent on the specific material or structure of the light diffusion plate. Kimura, however, teaches a light diffusion sheet for a liquid crystal display comprising multiple diffusion layers (Figures 2 and 3) optimized to have a high luminance, excellent light diffusing property, and high resistance to damage (Column 1 lines 47-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the light diffusion plate disclosed by Iijima to have multiple light diffusion layers such as in the light diffusion plate taught by Kimura. One would have been motivated to construct the light diffusion plate disclosed by Iijima according to the teachings of Kimura to benefit from a high luminance, excellent light diffusion property, and high resistance to damage (Column 8 lines 10-16 -see also Certificate of Correction, last page; Tables 1 and 2).

Regarding claims 2-4 and 13, Iijima fails to disclose at least one of the light diffusion layers as constituted of a diffusion plate, diffusion sheet, diffusion tacky adhesive material, or a diffusion film. Kimura, however, teaches at least one of the diffusion layers as constituting each of a diffusion plate or sheet (Figure 2 element 1), a diffusion tacky adhesive material (Figure 2

element 2; Column 3 lines 40-48), and a diffusion film (Figure 2 element 2; Column 3 lines 40-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed a light diffusion layer to constitute any of a diffusion plate or sheet, a diffusion tacky adhesive material, or a diffusion film such as in the light diffusion plate taught by Kimura. One would have been motivated to construct the light diffusion plate disclosed by Iijima according to the teachings of Kimura to benefit from a high luminance, excellent light diffusion property, and high resistance to damage (Column 8 lines 10-16 -see also Certificate of Correction, last page; Tables 1 and 2).

Regarding claim 5, Iijima as modified by Kimura discloses a light guide body (Figure 6 element 72) which is arranged at a back face side of the liquid crystal display panel and on which light from the light source is incident.

Regarding claims 6 and 7, Iijima as modified by Kimura discloses the polarizer as being arranged between the back-face-side substrate of the pair of substrates and the light guide body, and the light diffusion layer as being arranged between the back-face-side substrate and the polarizer (Figure 5 elements 15, 22, 30, and 72).

Regarding claims 10 and 11, Iijima as modified by Kimura discloses the polarizer as being arranged between the back-face-side substrate of the pair of substrates and the light guide body, a reflection polarizer as arranged between the polarizer and the light guide body, and the

light diffusion layer as being arranged between the polarizer and the reflection polarizer (Figure 6 elements 22, 15, 30, 40, and 72).

Regarding claim 12, Iijima as modified by Kimura discloses at least one of the light diffusion layers as being arranged between the back-face-side substrate and the polarizer, and at least one of the light diffusion layers as being arranged between the polarizer and the reflection polarizer (Figures 5 and 6).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima in view of Kimura and in further view of Kuroiwa et al. (U.S. Patent No. 6,317,180 "Kuroiwa").

Iijima as modified by Kimura discloses the polarizer as being arranged between the back-face-side substrate of the pair of substrates and the light guide body and at least one of the light diffusion layers as being arranged at a side of the polarizer where the light guide body is positioned (Figure 6). Iijima fails to disclose the light diffusion layer as on a surface of the polarizer. Kuroiwa, however, teaches the light diffusion layer as on a surface of the polarizer (Figure 1 elements 140 and 150; Column 5 lines 47-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the light diffusion layer on a surface of the polarizer. One would have been motivated to form the light diffusion layer on the surface of the polarizer to eliminate any gap between the devices (Column 5 lines 47-50) for reasons such as to seal the space from dust and to reduce the thickness of the display.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima in view of Kimura and in further view of Satoh et al. (U.S. Patent No. 5,847,795 "Satoh").

Iijima fails to disclose the polarizer as provided with an antiglare layer which acts as the light diffusion layer. Iijima discloses the diffusion layer as positioned adjacent to the polarizer, but does not disclose an antiglare property of the diffusion layer. Satoh teaches an antiglare layer provided on the polarizer, which acts as a light diffusion layer (Figure 3 elements 11a-11c).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an antiglare layer on the polarizer or configure the diffusion layer on the polarizer as an antiglare layer. One would have been motivated to provide such an antiglare function as a means of improving clarity of the displayed image by reducing stray reflections of external light (Satoh, Column 5 lines 15-44).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael H. Caley whose telephone number is (571) 272-2286. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael H. Caley
September 14, 2005
mhc

ROBERT KIM
SUPERVISORY PATENT EXAMINER